GNOMIK - 80-M QRP transcie

Introduction

The goal of this project is to provide to Amateur Radio beginners with a working QRPp CW transceiver that they build and learning the knowledge of transmitting and receiving equipment on the most of popular HF band 80 m.

This "Gnomik " transceiver contains two separate units: direct conversion receiver (RX) based on modified DC receiver designed by Vlad Polyakov RA3AAE and transmission unit (PA) based on standard scheme frequency-doubler and amplifier. The RX's heterodyne operate on a half of receiving frequency.

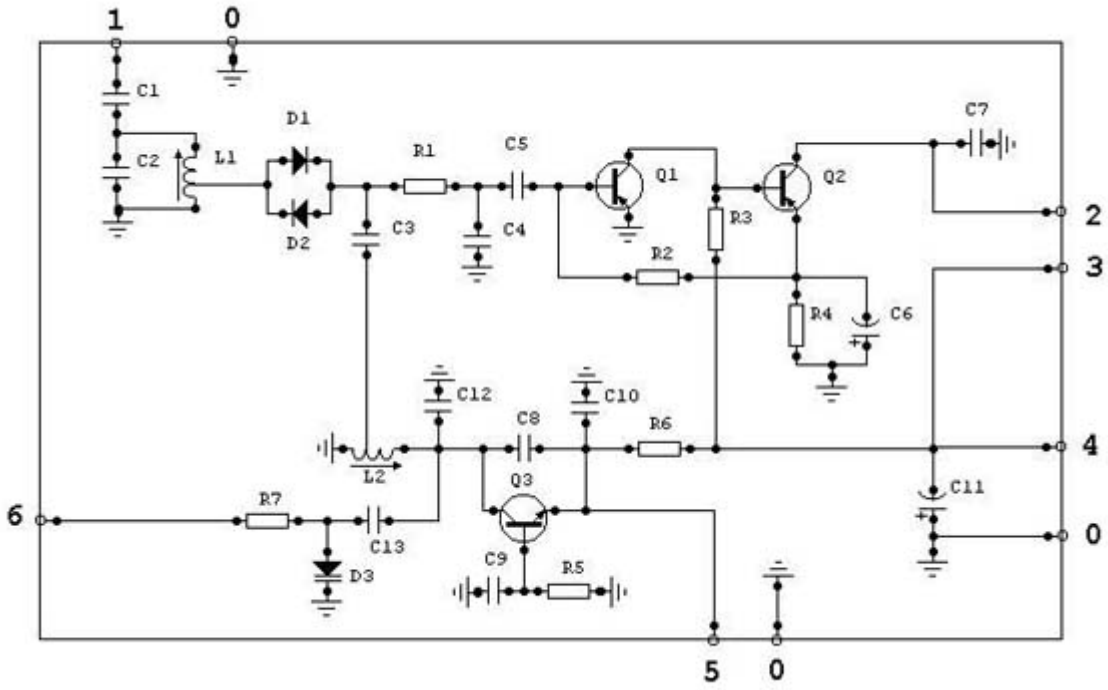
Schemes (example)

History

For the first time "Gnomik" was designed at 1986 year by Oleg RV3GM after he has experimented with RA3AAE DC receiver. Oleg updated receiver with transmission unit and after some modifications "Gnomik "was ready. There are some QSO's from Oleg's Log Book he has operated with "Gnomik":

Band - 80 m Mode - CW Antenna - VS1AA (15 m up)

Date	GMT	CALL	My RST	Report
07 Apr. 1986	20.35	RB5GFX	549	Kherson (Ukraine)
07 Apr. 1986	21.42	UA3QIX	559	Voronezh, Victor
11 Apr. 1986	18.30	UA4CPX	579	Saratov (on Volga)
18 Apr. 1986	00.27	UA6PCQ	569	Grozny (Caucasus)
20 Apr. 1986	19.03	UA1OB	569	nr Arkhangelsk
26 May 1986	20.37	UM8PGA	579	Naryn (Kirgiz Rep.)
31 May 1986	20.10	LZ2ZA	559	Varna
10 July 1986	19.54	HA6OJ	579	Mohora
etc...	etc...			

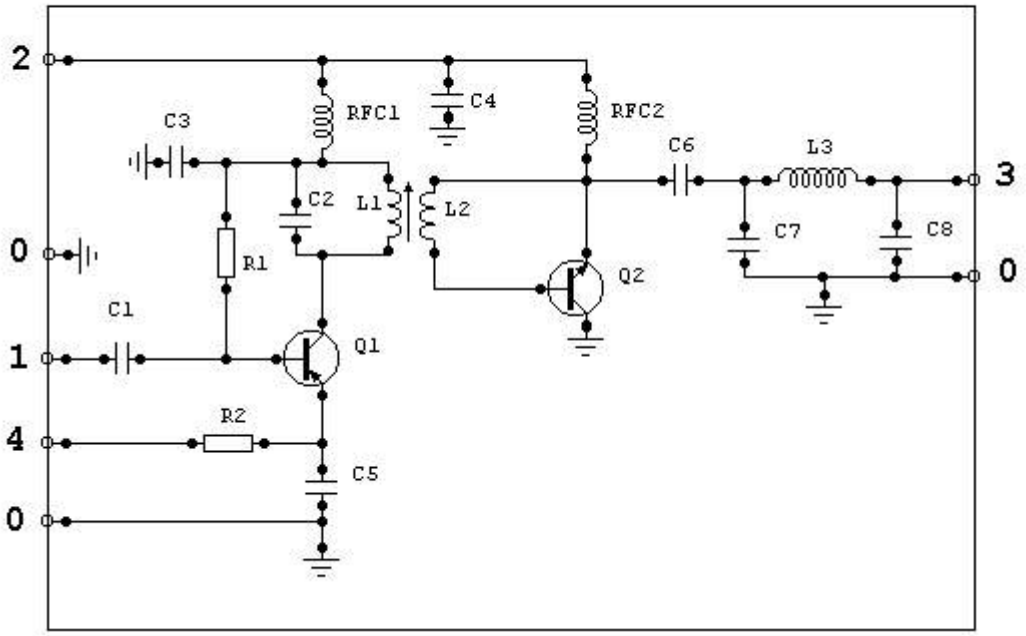


Parameters

Output power of transceiver is 500 mW approximately. Sensitivity of receiver is about 2 uV. Antenna's impedance 50 Ohm. "Gnomik" powered by stabilized DC power supply unit 12:13,8 V @ 150 mA max. current (positive to "ground").

Upgrade

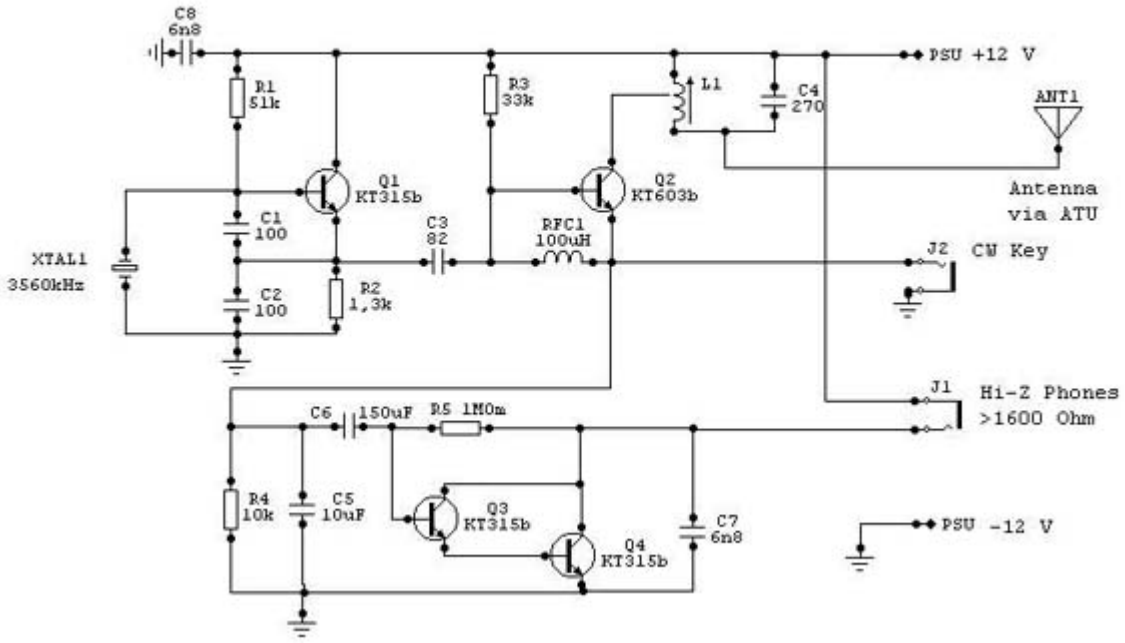
Optionally, you may insert to "Gnomik" some modifications: RIT, side-tone, digital frequency meter,
output RF meter, S-meter, Antenna Tuning Unit. That's fine! How you like! But don't forget, that the major advantage of direct conversion QRPp equipment is it's simplicity! 72 and good luck!



[Kit is available at RV3GM]

MICRO-80 - 80-M XTAL QRPp transcei

Pict.1 Microtransceiver Micro-80



"Micro-80" is the first smallest and the simplest transceiver in the World. This is a prototype of some next wellknow kits "PIXIE", "Tiny Tornado".

This transceiver's kit contains all the components (without xtal only), PCB and assembly manual. Just 4 n-p-n transistors, 5 resistors, 2 inductors and 7 capacitors are mount on 35 x 50 mm PCB.

There are some QSO's from RV3GM Log Book operated with "Micro-80":

[Kit is available at RV3GM]

Antenna - Long Wire (36 m up)
Band - 80 m 300 mW output

Date	GMT	CALL	My RST	Report
02 Mar. 1989	19.05	UA1ARA	569	nr Leningrad
17 Mar. 1989	19.25	UV9CAI	559	Ural
31 Mar. 1989	17.45	YU3CN	559	op. Bojan, QRP 3 w
10 Jul. 1989	20.55	UA1NBW	589	Karelia, Sergey
02 Feb. 1991	21.23	DK0HSC	559	HSC HQ
17 Feb. 1991	19.33	UB5WDQ	569	Lvov, QRP 5 w
19 Feb. 1991	16.35	SM6CGG	549	Boras, op. Arne, QRP 5 w
20 Feb. 1991	19.40	RO4OZ	559	Moldova
etc...	etc...			

Credit Line: **My first Station**: SPRAT, The journal of the G- QRP-C, #112, pp.: 4-7.

GNOMIC and **MICRO-80**: http://ruqrp.narod.ru

And some info about RU-QRP-C

RU- QRP- C

RU-QRP Club has organized 1'st August 2002 under the initiative Oleg V. Borodin RV3GM/QRP. By the purpose of creation of Club is the association the Radio Amateurs interested by communications on the small power equipment; propagation of operation on QRP in the purposes of reduction of mutual interferences, study of propagation radio waves, boosting of skill operations in a drain ether; the help initial to the Radio Amateurs in study the RX & TX equipment and antennas, rules of operation in a drain ether; an exchange by experience and hardening friendly between the Radio Amateurs of World Wide.

http://ruqrp.narod.ru

The member of Club can become any Amateur interested QRP having the license. For this purpose it is necessary to send to address Club or on to E-mail announcement the any shape with the indicating first name, middle initial, last name, callsign, address E-mails, post address. Briefly to tell about achievement in QRP. It is desirable to point age, experience of operation in drain ether and whenever possible to affix in aspect of files of a format *.jpg interesting photos for a photoalbum. At an entrance to Club necessarily it is required to give datas on the achievements on QRP. Such datas is statistics on wkd/cfm QRP DXCC and 2-way QRP DXCC (separately on sorts of CW, SSB, Digital and per Bands). See special blank on the link "Join to the Club" at the site. Each member of Club receives unique Member's number.

In Club is present library with a collection technical literature on to different aspects QRP. And also the subscription to journals of International QRP of Clubs: QRP Quaterly, SPRAT, OK-QRP etc. Club is submitted on constantly International Internet - Forums QRP-L, QRPp-I, G-QRP, OK-QRP. RU-QRP Club is an associative member of World QRP Federation (W.Q.F.)

On all questions, coupled with activity of Club, with by the offers on improvement Club operations, with the interesting projects welcome to the address: P.O. Box 229, Lipetsk, 398043, Russia (for the answer apply the SASE) or by E-mail master72@lipetsk.ru
RU-QRP Club's Chairman Oleg V. Borodin
72! de RV3GM

Club have a good cooperations with QRP-Clubs of other countries: QRP-ARCI, G-QRP, QRPp-I, Hawaii-QRP, Maryland Milliwatt, UR-QRP, OK-QRP etc.

QRP Amateur Radio WEBRING